

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1-25. (Canceled)

1 26. (New) A hard disk carrier package for providing high density storage,
2 comprising:
3 a hard disk carrier housing configured for insertion within a disk array chassis and
4 holding a plurality of hard disk storage devices proximate to one another; and
5 a package-level RAID controller, disposed with the carrier housing, the package-
6 level RAID controller providing a package-level RAID logical configuration for the
7 plurality of hard disk storage devices within the hard disk carrier housing.

1 27. (New) The hard disk carrier package of claim 26, wherein the package-
2 level RAID controller hides the physical address of the hard disk storage devices
3 disposed within the hard disk carrier housing.

1 28. (New) The hard disk carrier package of claim 26, wherein the package-
2 level RAID controller is further configured to provide a hot spare held in the hard disk
3 carrier housing for use when a hard disk storage device within the hard disk carrier
4 housing fails.

1 29. (New) The hard disk carrier package of claim 26, wherein the hard disk
2 carrier housing is configured to be conformal to multiple hard disk storage devices to
3 minimize the amount of space used to house a predetermined number of hard disk storage
4 devices.

1 30. (New) The hard disk carrier package of claim 26, wherein the hard disk
2 carrier housing further comprises fault indicators for allowing notification of an
3 inoperable hard disk storage device within the hard disk carrier housing.

1 31. (New) A storage system, comprising:
2 a plurality of hard disk carrier packages for providing high density storage and
3 configured for insertion in a disk array chassis, each hard disk carrier package comprising
4 a plurality of hard disk storage devices;
5 a hard disk carrier housing for holding the plurality of hard disk storage
6 devices proximate to one another; and
7 a hard disk carrier package-level RAID controller, disposed within the
8 hard disk carrier housing, for providing a package-level RAID logical configuration for
9 the plurality of hard disk storage devices within the hard disk carrier housing
10 a disk array chassis for holding the plurality of the hard disk carrier packages for
11 providing high-density storage;
12 a package aggregator, coupled to the plurality of hard disk carrier packages, for
13 providing connections to each of the plurality of hard disk carrier packages for power,
14 control and signaling; and
15 a system level controller, coupled to the plurality of hard disk carrier packages,
16 for implementing a desired system level storage configuration.

1 32. (New) The storage system of claim 31, wherein the system level
2 controller comprises a system-level RAID controller for providing a system-level RAID
3 logical configuration across the plurality of hard disk carrier packages and each of the
4 hard disk carrier packages include package-level RAID controllers providing a hard disk
5 carrier package-level RAID logic configuration across the plurality of hard disk storage
6 devices in a hard disk carrier package.

1 33. (New) The storage system of claim 31, wherein a first of the plurality of
2 hard disk carrier packages presents a first hard disk carrier package-level RAID logical
3 configuration across the plurality of hard disk storage devices in the first of the plurality
4 of hard disk carrier packages and a second of the plurality of hard disk carrier packages
5 presents a second hard disk carrier package-level RAID logical configuration across the
6 plurality of hard disk storage devices in the second of the plurality of hard disk carrier
7 packages, the first hard disk carrier package-level RAID logical configuration being
8 different than the second hard disk carrier package-level RAID logical configuration.

1 34. (New) The storage system of claim 31, wherein the system level
2 controller comprises a system-level RAID controller for providing a system-level RAID
3 logical configuration across the first and second of the plurality of hard disk carrier
4 packages.

1 35. (New) The storage system of claim 34, wherein the plurality of hard disk
2 carrier housings further include an access device for structuring access to physical
3 addresses of the plurality of hard disk storage devices within a hard disk carrier housing
4 and providing access to each of the plurality of hard disk storage devices over one
5 connection.

1 36. (New) The storage system of claim 34, wherein the plurality of hard disk
2 carrier housings further include an access device for aggregating physical addresses of
3 hard disk storage devices within a hard disk carrier housing into logical addresses and
4 makes the logical addresses of the plurality of hard disk storage devices within a hard
5 disk carrier housing available over one connection.

1 37. (New) A method for providing a high density storage package,
2 comprising:
3 providing a plurality of hard disk storage devices within a hard disk carrier
4 housing configured as a hard disk carrier package for insertion within a disk array
5 chassis;
6 providing a package-level RAID logical configuration for the plurality of hard
7 disk storage devices within the hard disk carrier housing.

- 1 38. (New) The method of claim 37 further comprising:
- 2 providing a plurality of hard disk carrier packages, each hard disk carrier package
- 3 including a plurality of hard disk storage devices and configured for insertion in a disk
- 4 array chassis;
- 5 providing connections to each of the plurality of hard disk carrier packages for
- 6 power, control and signaling; and
- 7 implementing a desired system level storage configuration across the plurality of
- 8 hard disk carrier packages.